LEARN Webinar

Forward Auction

January 15, 2015

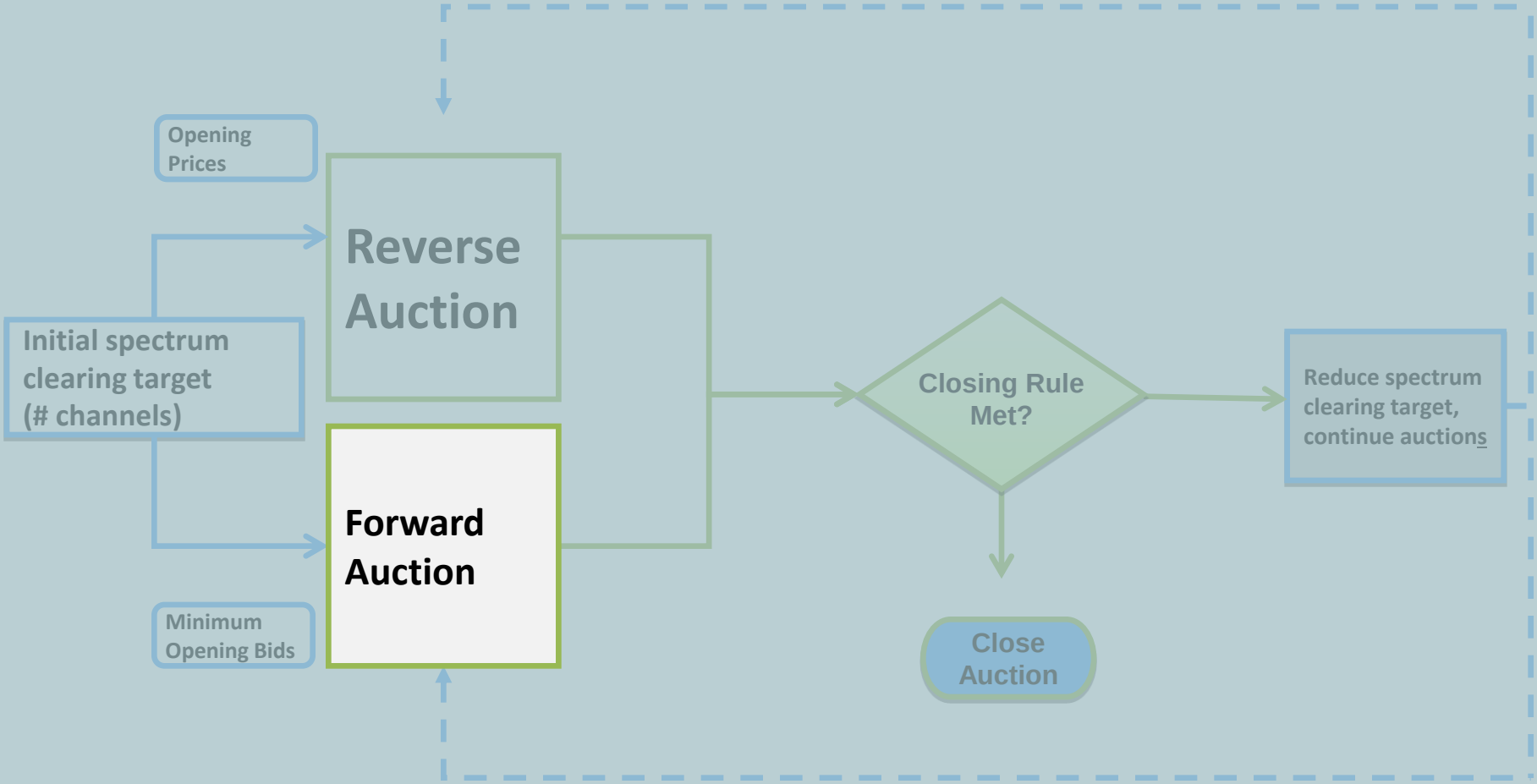
Ex Parte Information

- With a limited exception, attending and/or participating in this webinar on proposed procedures to conduct the broadcast incentive auction made by the Commission in the recent *Comment Public Notice*[1] will not require a filing under the Commissions rules governing *ex parte* communications.[2]

- Presentations to Commission personnel directed to the merits or the outcome of the matters raised in the Comment Public Notice or other pending proceedings will require the filing of an *ex parte* notice.[3]

[1] *Comment Sought on Competitive Bidding Procedures for Broadcast Incentive Auction 1000, Including Auctions 1001 and 1002*, GN Docket No. 12-268, Public Notice, FCC 14-191 (rel. Dec. 17, 2014). [2] *See* 47 C.F.R. §§ 1.1200 *et seq.* [3] *See Media Bureau Issues Limited Modification To Ex Parte Requirements For Broadcasters Filing Notices In The Expanding The Economic And Innovation Opportunities Of Spectrum Through Incentive Auctions Proceeding*, GN Docket No. 12-268, Public Notice, 29 FCC Rcd 2002 (2014). If a broadcaster attends a meeting without counsel or is otherwise unable to make a filing without disclosing its identity, Commission staff will file the *ex parte* notice in order to preserve the broadcaster's anonymity.

Introduction



Today's Topics

- Outline forward auction proposed procedures
- Main idea: two phases
  - Ascending clock phase
    - Determines winners of generic blocks in two categories
  - Assignment phase
    - Determines assignment of specific-frequency licenses to winners of generic blocks
- Key points of an ascending clock auction:
  - Focus today is on how and why elements of the forward auction work together
  - In many ways an ascending clock auction is similar to Commission's standard simultaneous multiple round auction format

Today's Topics

- What are generic blocks and why use them here?
- Why use an ascending clock auction here and how does it work, including:
  - intra-round bids,
  - requests to reduce demand, and
  - three proposed bid types.
- Why propose an extended round and how will it work?
- How will auction implement the spectrum reserve?
- How will the assignment phase work?

Generic Blocks

- Speed
  - Auction will offer many similar blocks in each area
  - Similar blocks are grouped into categories for bidding
  - In each PEA, a uniform price for all blocks in a category allows auction to move more quickly
- Facilitates move to a new stage with a lower clearing target, if necessary
  - Can remove one generic block from band plan without affecting a particular bidder

Block Categories

- Propose two categories of generic blocks
  - Category 1: zero to at most 15% pops impaired by interference from broadcast stations
  - Category 2: over 15% to at most 50% pops impaired
  - Will not offer blocks if more than 50% pops impaired

- Limit overall allowed impairments in setting clearing target
  - Propose total nationwide limit of 20% impaired weighted pops over all licenses
  - Otherwise set a lower clearing target

Ascending Clock Auction

- Clock phase determines a price for generic blocks at which demand does not exceed supply
- Separate price clock in each category in each PEA
  - Uniform price applies to all blocks in a category/PEA
  - Simultaneous bidding in all PEAs
- Price clocks tick up as long as demand exceeds supply in a category and PEA

Ascending Clock Auction

- Series of bidding rounds, each begins with an announced clock price
- Bidders indicate the number of blocks they want at a per-block price
  - A bid indicates that the bidder is willing to pay the specified price for that quantity of blocks
  - No “provisional winners” – only bidders that are still “in” at a specified price
- Auction system calculates total demand for blocks in each category in each PEA
  - If bidders demand more blocks than are available, the clock price ticks up for the next round
  - In the next round, bidders will be asked how many blocks they demand at the higher price
- Winners are those bidders still demanding blocks when total demand does not exceed supply
  - Winning clock phase prices are prices at which demand no longer exceeds supply

Intra-round Bids

- Large clock price increments will speed up the auction, but may “overshoot” the clearing price

Example:

  - Assume 8 blocks in Category 1 are available in a PEA
  - At clock price of $50, bidders demand a total of 10 blocks
  - At clock price of $60, bidders demand a total of 7 blocks

Intra-round Bids

- Intra-round bids indicate an intermediate price at which a bidder's demands change
- Bids can indicate an increase or decrease in demand
  - Examples focus on reductions
- Example continued:
  - At $53, a bidder that was demanding 2 blocks indicates that it wants only 1 block if the price goes higher
  - At $57, another bidder wants to reduce from 3 to 2 blocks if the price goes higher
  - At $59, a third bidder wants to reduce from 1 to 0 blocks if the price goes higher
  - Other bidders accept the clock price of $60 for the remaining 4 blocks

Intra-round Bids

- The auction system considers bids in increasing order of intra-round prices
- Bid processing stops at an intra-round price if demand equals supply at that point
- Example continued:
  - The reduction requested at $53 is processed first and brings total demand to 9
  - The reduction requested at $57 is processed and brings total demand to 8
  - The price stops at $57, since demand equals supply at 8
  - The reduction requested at $59 is not processed because the price did not get to $59 so the bidder is still in for its original demand at $57
  - The remaining bidders that accepted $60 remain in at $57
  - No bidder pays more than it is willing for its processed demands
- If no bidder later increases its demand, when the auction ends, the price of all the generic blocks in that category/PEA will be the stopped price

Reduction Requests

- Bids to reduce demand are treated as requests and fulfilled as long as total demand will be at least equal to supply
  - Ensures that the Final Stage Rule remains satisfied
- Three bid types help a bidder manage its reduction requests and ensure that a bidder will not pay more than it agreed to accept
  - Simple bids
  - All-or-Nothing bids
  - Switch bids

Simple Bids

- Simple bids may be processed partially
  - Bids will be processed in full if sufficient demand exists
  - If processed partially, the price stops at the bid price
    - Bidder won't pay a higher price for remaining blocks it demands
- Example:
  - Suppose instead of reducing from 3 to 2 at $57, the bidder requests a reduction from 3 blocks to 1 at $57
  - After the reduction at $53, total demand was 9. A reduction by 2 would bring demand to 7, below supply of 8
  - This "simple bid" will be partially processed. The auction system will reduce the bidder's demands by 1, but not by 2
  - Demand is equal to supply at 8, and the price stops at $57
  - The bidder does not pay more than it was willing to pay for its processed demand
    - Price applies to all blocks in the category/PEA

Partial Processing of Simple Bids

- An intra-round bid price indicates a “point of indifference”
  - Below that price, the bidder wants the unreduced amount
  - Above that price and up to the clock price, the bidder wants the reduced amount
  - At that price, the bidder will accept the reduced amount, the unreduced amount, or any quantity in between
- The intra-round price indicates the highest price the bidder is willing to pay for the unreduced number of blocks

Partial Processing of Simple Bids

- Example continued:
  - Assume a bidder had been bidding for 3 blocks and requests a reduction by 2 at $57. This means:
    - At a price below $57, the bidder wants 3 blocks
    - Between $57 and $60, it wants 1 block
    - At $57, it is willing to take 1, 2, or 3 blocks
  - If excess demand at $57 is at least 2, the reduction will be fully processed
  - If excess demand at $57 is only 1, the reduction will be partially processed
    - The bidder's demand will be reduced by 1, to 2
    - Partial processing means that demand now equals supply, so price stops
    - Bidder holds 2 blocks at $57
  - If there is no excess demand, it will still demand 3 blocks, but the price will not continue to go up
    - Price may have stopped below $57 if another bidder's reduction brought demand equal to supply

All-or-Nothing Bids

- Useful if a bidder does not want a partial reduction
- Processed in full or not at all
  - If not processed, price does not stop
  - Can “backstop” with a simple bid to stop price clock
- Consider the example again:
  - The bidder that wants to reduce its demands by 2 at $57 places an all-or-nothing bid instead of a simple bid.
  - Bid is not processed because it would bring demand below supply, so the bidder still demands the 2 blocks at prices up to the clock price of $60.
  - The request for reduction by 1 at $59 is then processed, bringing demand down to 8
  - The price stops at $59 because demand equals supply at 8

Switch Bids

- Useful if a bidder wants to switch demand from one category to another within a PEA with a single bid
- May be processed partially, but increase in one category will always match decrease in the other
- Back to the example:
  - At $57, the bidder places a switch bid to move demand for 2 blocks from Category 1 to Category 2
  - There is excess demand of only 1 block in Category 1, so the bidder's demand in Category 1 is reduced by 1, and its demand for Category 2 blocks is increased by 1.

Extended Round

- Helps speed the auction and potentially clear more spectrum
  - Avoids need to run auction to completion for every category/PEA to determine that the FSR conditions cannot be met
  - Gives bidders the opportunity to express demand at higher prices to meet the FSR for this stage, avoiding the need to move to a lower clearing target
- Regular clock rounds pause while extended round bidding is conducted
  - If bidding is successful in meeting FSR, regular clock bidding rounds resume
  - If FSR not met, move to a new stage with a lower clearing target

Extended Round

- Implemented if bidding stops (demand does not exceed supply) in large markets before FSR is met
- Propose extended round bidding only for Category 1 blocks in “high demand” markets
  - Extended round clock price based on shortfall to meet FSR plus cushion
  - Bidders can make intra-round bids
- If FSR is met, the uniform price for all Category 1 blocks in each high demand market increases only enough to meet FSR

Mobile Spectrum Holdings Reserve

- Implemented when Final Stage Rule (FSR) is met and thus final supply is established
- In each PEA, bidders' demands for Category 1 blocks are divided between reserved and unreserved blocks
  - Demands by reserve-eligible bidders (if any) assigned to reserved category until demand equals supply
  - Remaining demands by reserve-eligible bidders and others assigned to unreserved category
  - Reserve-eligible bidders can move between reserved and unreserved categories
- Starting in next round, separate price clocks for reserved and unreserved Category 1 blocks
  - Essentially creates an additional bidding category in each PEA
- Regular clock rounds continue until bidding naturally ends

Assignment Phase

- Winners of generic blocks can bid for specific frequencies by area
  - Bidding by area-by-area, using single-round sealed-bid format
  - System aims to assign contiguous frequencies to winners of multiple blocks
- To simplify:
  - Conduct bidding by groups of PEAs when possible
  - Assign in largest PEAs first to give bidders a “footprint” to work from
- Assignment round prices will be added to clock phase prices
  - System calculates “second” prices, generally below the winner’s bid amount
  - Propose clock prices for specific blocks be adjusted based on block-specific impairment percentage

Forward Auction Final Prices

- For a specific license, final price is
  - Winning clock phase price for the category/PEA
  - Adjusted for percentage of any impairment to the frequency block
  - Plus any assignment round bid
  - Reduced by any small business bidding credit

- In the example assume:
  - The bidder wins 1 Category 1 block at $57 in the Clock Phase
  - In the Assignment Phase, the bidder bids for and is assigned a specific frequency license at an additional price of $10
  - The specific frequency license is 2% impaired
  - The final price is {($57)*(.98)}+{$10} = $65.86
  - If the bidder were eligible for a bidding credit, the price would be reduced further by the applicable bidding credit percentage

Activity Rules

- Propose bidders be required to bid actively on 92-to-97% of bidding units, calculated based on processed demands
- Bids will not be processed unless the bidder has sufficient bidding eligibility
- Because no provisional winners, a bidder needs to bid in every round if still willing to accept the price, even if the price has not changed
  - "No bid" in a round is the same as a simple bid to reduce demand to 0 at the round's starting price

Upcoming Webinars

- Reverse Auction Webinar: Tuesday, Jan. 20 at 10:30 a.m. (EST)
- Integration Webinar: Friday, Jan. 23 at 10:30 a.m. (EST)
- Also, remember to check the LEARN website for updates at www.FCC.gov/learn

Comment and Reply Dates

- Comment Date: Feb. 13, 2015
- Reply Date: March 13, 2015
- Please file comments in the following dockets:
  - AU Docket No. 14-252: Comment Sought on Competitive Bidding Procedures for Broadcast Incentive Auction 1000, Including Auctions 1001 and 1002
  - GN Docket No. 12-268: Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions
- We request that a *copy* of all comments and reply comments be submitted to auction1000@fcc.gov.

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Questions?

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